

# EquineReview

**Introduction:** The topics of facial nerve paralysis, synovitis following blackthorn injury, sepsis of the calcaneal bursae, and the extent to which xylazine and acepromazine affect the assessment of forelimb lameness are discussed in this month's selection of recent papers for equine practitioners.

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## Facial nerve paralysis in equids

In contrast with cats, dogs and humans, facial nerve paralysis is poorly documented in equids. In this retrospective case series, Boorman and colleagues (*J Vet Intern Med.* 2020; 34:1308–1320. <https://doi.org/10.1111/jvim.15767>) describe the clinical features of 64 horses presenting with facial nerve paralysis, excluding postoperative cases. The most common aetiology was trauma, with true idiopathic cases being unusual. The majority (92%) of cases presented with unilateral disease. Central nervous system disease was the second most common cause, emphasising the need for thorough clinical and neurological examination in such cases. Over 50% of horses were unable to blink and required specific ocular therapy, and 25% of horses were euthanased (only one of these being a direct result of the facial nerve paralysis). Of the surviving animals, 72% showed complete resolution of paralysis and 14% showed partial improvement. A weakness of this study was the lack of advanced imaging (computed tomography) in the majority of cases, resulting in facial nerve paralysis, making it hard to draw valid conclusions with regards to prognostic indicators.

## Blackthorn injury and synovitis

In the UK horse population, penetrating injuries from blackthorns (*Prunus spinatus*) are a common cause of synovitis and lameness, but the prognosis following treatment for this injury is poorly described compared with traumatic synovial sepsis. This prospective case series by Ashton (*Equine Veterinary Education.* 2020; 32: 492–499. <https://doi.org/10.1111/eve.13008>), describes the treatment and out-

come of 35 cases of confirmed blackthorn injury that resulted in synovitis (horses with injury to significant soft tissue structures were excluded). All horses were treated surgically in two stages; first, the thorn was removed via an incision created using ultrasound guidance, then secondly an endoscopic lavage of the synovial structure was performed. In 49% of cases, the blackthorn was present within the synovial cavity. Both the total nucleated cell concentration and total protein were slow to return to normal after surgery, with values remaining significantly elevated 2 days postoperatively. However, the prognosis for a return to work was excellent and all horses recovered. This study suggests that synovitis secondary to blackthorn injury has a more favourable prognosis, compared with traumatically induced synovial sepsis.

## Calcaneal bursa sepsis

Infection of the calcaneal bursae is a common sequel to wounds on the plantar aspect of the tarsus. Endoscopic treatment of the septic synovial structure and wound debridement under general anaesthesia are considered the gold standard of treatment, but the prognosis for this particular injury is poorly documented. In a recent multicentre retrospective case series published in the *Equine Vet J*, Isgren and colleagues (2020; 52:404–410. <https://doi.org/10.1111/evj.13180>) aimed to identify prognostic indicators and document the prognosis in 128 horses with sepsis of the calcaneal bursae.

Of the 123 horses that recovered from general anaesthesia, 88% ( $n=108$ ) survived to hospital discharge, of which 75% ( $n=92$ ) required a single surgery. A total of 20 horses underwent

a second surgical procedure, of which 60% ( $n=14$ ) survived to discharge. Of the horses discharged from hospital, 87% survived long term and 91% returned to some form of athletic function. Multivariate analysis identified that an administration of systemic antimicrobials before referral was associated with reduced mortality, while moderate or severe tendon involvement, bone involvement and wound dehiscence were associated with increased mortality.

## Xylazine or acepromazine in assessing forelimb lameness

Diagnostic anaesthesia is a key component in equine lameness investigation. This can be challenging in fractious horses, and can be aided by the administration of acepromazine or xylazine. The effects of these pharmacological agents on both subjective and objective gait assessment were evaluated in a prospective, blinded, cross-over study by Morgan and colleagues in the *Equine Vet J.* (2020; 52: 593–600. <https://doi.org/10.1111/evj.13225>). Six horses with experimentally induced forelimb lameness (graded 3/5) were treated with intravenous xylazine (0.1–0.2 mg/kg), intravenous acepromazine (0.02–0.04 mg/kg), intravenous saline (placebo) or an abaxial sesamoid nerve block. Both objective and subjective lameness assessment were performed for up to 60 minutes after each treatment, with a 7-day washout period.

As anticipated, the nerve block caused a significant reduction in lameness, but this was observed over a 45-minute time period, confirming the previously reported finding that foot-related lameness can take considerable time to be fully alleviated by perineural anaesthesia. No reduction in the mean subjective and objective lameness scores was noted following acepromazine or xylazine administration. Significant sedation-induced ataxia was also not observed. These findings support the use of low doses of acepromazine and xylazine during forelimb lameness assessment, but further study is needed to assess the effects of these agents in horses with subtle lameness or with lameness originating from structures other than the foot. **EQ**